



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,866	07/21/2006	Keitaro Yonezawa	YONE3025/JC/PMB	8126
23364 7590 08/10/2009 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
HEPPERLE, STEPHEN M				
ART UNIT		PAPER NUMBER		
3753				
MAIL DATE		DELIVERY MODE		
08/10/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/586,866

**Applicant(s)**

YONEZAWA ET AL.

**Examiner**

STEPHEN HEPPERLE

**Art Unit**

3753

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 5/3-4, 6, and 7 is/are rejected.
- 7) ☒ Claim(s) 5/1-2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 June 2009 has been entered.

Claims 6-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation, "to prevent a working fluid from freely flowing between the leading edge portion of the cylindrical casing and the bottom wall of the mounting hole" is not understood, and appears to be incorrect. Space 43 of Fig 2B and space 77 in Fig 3B clearly show "free flowing" between the end of the cylindrical housing and the bottom of the hole. Even if the space didn't exist, communication in this area is necessary for the valve to operate.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitton (1,721,349). Mitton shows a valve structurally capable of bidirectional flow where check valve 14 is biased against check valve seat 24 but can be moved away by an adjustable rod 19 having a throttle valve seat at its end. The device has a meter in inlet 30, meter out outlets 21 and 25, with valve chamber 28 and rod chamber 22 between. In operation, the flow in line 25 is bidirectional. Also, higher pressure in either line 21 or 25 will cause the check valve to open.

Claims 3, 4, 5 as dependent on 3 and 4, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaisha (JP 39-18634) or *JP 11347869*. Kaisha shows a bidirectional valve with metering inlet 6, rod chamber for rod 15, a biased closed check valve 12 in a valve chamber, and a metering outlet 9. The contact of the valve with the rod tip is seen as the throttle valve seat, and the seat 11 is seen as the check valve seat. The valve is mounted in a barrel portion which is screwed into a mounting hole of a hydraulic cylinder. Passage 7 is open at a bottom surface of the bore, and the other end portion of the passage is open at a peripheral surface of the mounting hole at 6. As the leading end portion of the cylindrical case is made to approach a bottom wall of the bore, the o-ring causes the actuation port and pressure port to be partitioned, so that communication can be reestablished only by the valve.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Field (602,598). Field shows a valve with a weight biased check valve 9 that rests on check valve seat, but can be lifted away by adjustable rod 10, which end is seen as a throttle valve seat. When lifted, flow can proceed around the ball and through slots 14 in the rod. Inlet 4 leads to valve chamber inside 3, then to a rod chamber below, and to outlet 7. While the flow is not intended to be bidirectional, structurally, it is fully capable of such flow. Field does not show a bias spring. However, such springs are well know, and it would have been obvious to add a spring to bias the ball closed so that the valve can be used in different orientations with respect to gravity.

Claims 6-7 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Kaisha (JP '634). Kaisha shows an outlet 9 in the side of the valve housing. However, it would have been obvious to put the hole in cap 14 instead as a fully equivalent location. The modification would permit the housing to have only two outer diameters (no annular gap necessary at existing hole 9), and if desired, to move

the o-ring close to cap 14. It would have also been obvious, if desired, to shift the valves so that a single straight hole can be formed between the bottom wall and the hydraulic cylinder, to reduce machining costs.

Claim 5 as dependent on claims 1-2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are similar to Field.

Applicant's arguments filed 26 June 2009 with respect to Kaisha (JP '634) have been fully considered but they are not persuasive. As stated above, the argument is not understood, but the alternative rejection over 35 USC 103 may address the arguments. Rejections over Hewitt have been withdrawn, as it appears incapable of bidirectional flow.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN HEPPERLE whose telephone number is (571)272-4913. The examiner can normally be reached on flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEPHEN HEPPERLE/  
Primary Examiner, Art Unit 3753